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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/525,509

02/24/2005

Koji Morita

50340-184

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EXAMINER

MERCADO, JULIAN A

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

09/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/525,509 | Applicant(s) MORITA, KOJI | |
| | Examiner JULIAN MERCADO | Art Unit 1795 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☒ Claim(s) 17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>February 24, 2005</u> . | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Information Disclosure Statement

The Information Disclosure Statement (IDS) filed on February 24, 2005 has been considered by the examiner.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102 and 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 17 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dankese (U.S. Pat. 3,516,867).

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For claim 17, Dankese et al. teaches a fuel cell system comprising a fuel cell having an electrolyte membrane [107] disposed between an air and fuel electrode [108]. See col. 3 lines 29-36. Air is supplied to the air electrode through conduit [404], likewise, fuel gas is supplied to the to the fuel electrode through conduit [412]. See col. 6 lines 26-50. While an air supply device or fuel gas supply device is not explicitly disclosed, the examiner asserts that these respective devices are present, inherently, in the fuel cell system of Dankese et al. as devices of this type and function are necessarily present to effect the supplying and exhausting of the gases through conduits [404] and [412], absent of a showing by applicant that the claimed invention distinguishes over the combined references. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) and *In re Spada*, 15 USPQ 2d 1655 (Fed. Cir. 1990) A humidity regulation module has a dry air passage [403] and a humid air passage [402], i.e. humidifier and dehumidifier, respectively, which allows for the movement of water from the humid air passage to the dry air passage, "[t]he condensed portion of the reaction product will be supplied to the humidifier through conduits 408." See col. 6 lines 42-44. The examiner notes that claim 17 recites that the air electrode is divided into an upstream section and a downstream section *with respect to a flow of supplied air*. This division of the electrode, therefore, may be fairly interpreted as an arbitrary division of the electrode into two sections so long as the portion of the claim which defines this division *with respect to a flow of supplied air* is met. In Dankese, Figure 4, shows that the flow of supplied air enters the fuel cell through a first wall (shown by the topmost wall of fuel cell [401]) and exits the fuel cell through second wall (shown by the lowermost wall of the fuel cell). The first section may be thus defined by the topmost wall and the second section may be thus defined by the lowermost wall; the exact demarcation lies somewhere between the first topmost

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wall and the second lowermost wall, and for purposes of claim interpretation, the exact boundary is not critical since the interpretation of Dankese in this manner nonetheless meets the claimed division in a manner *with respect to a flow of supplied air*. The claimed steps in which the "air [is] supplied from the air supply device..." and "air [is] discharged from the upstream section...." have not been given the effect of a structural limitation in the claim, as these features are process steps. Notwithstanding, given the interpretation of Dankese having an upstream section and downstream section for the reasons set forth herein, air from the dry air passage [403] supplies air to the upstream section (and downstream section) of the fuel cell, to the humid air passage [402], recycled back to the dry air passage [403] and routed to the downstream section (and upstream section) of the fuel cell in a continuous loop. See col. 6 lines 16-38.

Allowable Subject Matter

Claims 1-16 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art of record does not teach or suggest the instant invention regarding a fuel cell assembly having first and second oxygen electrodes having respective first and second oxidant gas channels as claimed, and having a dehumidifier downstream of the first oxidant gas channel and upstream of the second oxidant gas channel.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

/Julian Mercado/
Examiner, Art Unit 1795

/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795